

Abstract

Cell lysis compositions, methods for extracting and isolating proteins and peptides from a host cells using the compositions, kits and apparatus for extracting and isolating protein and peptide molecules from host cells and for detecting for the presence of a protein or peptide. The composition allows for the extraction and isolation of proteins and peptides from host cells without the need for mechanical disruption and with or without isolation of the cells from cell medium. The composition includes at least one surfactant having a hydrophobic-lipophilic balance value in the range from about 11 to about 16; and at least one cell membrane altering compound.